Remarks/Arguments

The present application has been amended in response to the Examiner's February 2, 2005 Office Action.

Amendments to the Claims

Section 102 Rejections

The Office rejected claims 1 3, 7 through 11, 13, 18, 19, and 21 through 31 as anticipated by Kondo, United States Patent No. 5,528,773. Applicant has amended claims 1, 9, 17 through 22, 30, and 31, and respectfully requests reconsideration of this rejection.

Claim 1, as now amended, claims an edge surface comprising a substantially smooth surface having an underlying layer comprising a second set of data. Similar amendments are submitted for the other independent claims, claims 21, 22, 30, and 31. Kondo discloses nothing of the sort.

Kondo encodes bar codes 22 on his peripheral edge surface 23 of his optical disk 21. *See* column 4, lines 54-56. He encodes the bar codes by removing material, such as by cutting away ridges of material from the edge, or by adding material, such as ink, to the edge.

Kondo first describes forming the bar codes 22 from a plurality of notches and ridges. *See* column 4, lines 57-59. His notches are no more than 300 μm in depth and shaped like a U or a V. *See* column 4, line 62 to column 5, line 5. Kondo prepares these notches and ridges by molding them into the plastic of the disk. *See* column 5, lines 12-48. (Of course, since the notches and ridges are formed during the molding process, the bar codes are only readable, not writeable, as with the optic disks of the present invention.)

Kondo claims this serrated edge as an advantage of his invention, as it makes it difficult to copy the data on the edge surface. *See* column 6, lines 20-24. Advantageous as it might be to

Kondo, this system has disadvantages. Occlusion of a ridge or damage or wear to a notch, from, for example, handling a CD disk, will render the data inaccessible. Kondo may find the tradeoff acceptable to preserve copy protection. A CD prepared according to Kondo's invention, however, with even only one or a few ridges occluded, broken off, or worn away, will be unreadable.

The present invention does not suffer from this infirmity. Because the edge surface of a disk prepared according to claim 1 of the present invention is smooth, and the data is presented on an underlying layer, rough handling and wear will not affect the data.

Kondo describes alternate embodiments. For example, he suggests inscribing notches and ridges by using a laser beam. *See* column 6, lines 41-42. The notches and ridges, however, even if prepared by a laser beam, are still notches and ridges and have the problems described above.

Kondo also suggests printing the bar codes in ink on the peripheral edge surface. *See* column 6, lines 40-41 and 49-52. The printed bar code on the peripheral edge surface suffers from similar problems. Contamination, smudging, and general wear and tear will erode, wipe away, or cover the ink, rendering the disk unusable. The invention of the present application solves this problem by placing the data on an underlying surface.

Further, Kondo does not describe optical methods to read, write, or re-write data on his edge surface. Kondo specifically teaches recording his bar codes 22 "along a peripheral edge surface 23 of the optical disc where the optic head cannot scan." *See* column 4 lines 54-57. Conversely, the present invention affirmatively claims optical methods to read, write and re-write data.

The Examiner noted in the Office Action that the claims as the previously existed did not require or preclude mechanical ridges. The independent claims, as now amended, specifically claim an edge surface having a substantially smooth surface and an underlying layer with the second set of data. Thus, mechanical ridges are precluded. Kondo therefore does not anticipate the independent claims of the present application.

To anticipate a claim, the reference must teach every element of the claim. *E.g.*, MPEP Section 2133.02. Kondo does not teach every limitation of the independent claims. Those claims are therefore patentable over the prior art.

Section 103 Rejections

The Office rejected claims 12, 14 through 17, and 20 as being unpatentable over Kondo in view of United States Patent No. 4,277,071 to Birt. These claims are all dependent directly or indirectly on claim 1. Applicant requests reconsideration of the rejections of those dependent claims in light of the amendment to claim 1 as set forth above.

Since Kondo, as set forth above, does not anticipate claim 1 the claims dependent on claim 1 cannot be obvious in light of Kondo and other art. Neither Birt nor Kondo teach the limitation added to claim 1 by the present amendment. All claim limitations must be taught or suggested by the prior art to establish *prima facie* obviousness of a claimed invention. *See* Manual of Patent Examining Procedure § 2143.03. Since the combination of Birt and Kondo does not teach all the limitations of claims 12, 14 through 17, and 20, those claims therefore are not obvious.

Additionally, the Office rejected claims 16 and 17 under Section 103(a), but no explanation was given. These two claims apply to monitoring characteristics of the disk, such as

tilt, vibration, or rotation speed. Neither Kondo nor the other art cited describes any such monitoring function. Accordingly, these claims should have been allowable even before the amendments to claim 1 discussed above. Accordingly, Applicant requests reconsideration of this rejection.

It is expected that this Response places the present application in condition for allowance. Should the present claims not be deemed adequate to effectively define the patentable subject matter, the Examiner is respectfully urged to call the undersigned attorney of record to discuss the claims in an effort to reach an agreement toward allowance of the present application.

Respectfully submitted,
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Date: 5 May 2005

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